

UNITED STATES DISTRICT COURT  
DISTRICT OF MASSACHUSETTS

CIVIL ACTION NO. 85-489-RGS

UNITED STATES OF AMERICA

v.

METROPOLITAN DISTRICT COMMISSION, et al.

CIVIL ACTION NO. 83-1614-RGS

CONSERVATION LAW FOUNDATION  
OF NEW ENGLAND, INC.

v.

METROPOLITAN DISTRICT COMMISSION

SCHEDULE SEVEN COMPLIANCE ORDER NUMBER 246

December 30, 2019

STEARNS, D.J.

On December 16, 2019, the Massachusetts Water Resources Authority (MWRA) filed its Biannual Compliance and Progress Report (the 246th such report over the course of this now 34-year-old litigation). With the Report, the MWRA filed its Semiannual CSO Discharge Report No. 3, January 1,

2019 – June 30, 2019 (dated October 31, 2019) (Discharge Report).<sup>1</sup> The United States and the Conservation Law Foundation have indicated that they do not intend to offer comment.<sup>2</sup>

As noted in the court's 245th Compliance Order, the MWRA, the United States Environmental Protection Agency (EPA), and the Massachusetts Department of Environmental Protection (DEP), entered an agreement in July of 2019 (approved by the court at a July 19, 2019 public hearing) extending the completion date of the performance assessment of the Long-Term CSO [Combined Sewer Overflow] Control Plan (LTCP) by one year to December 31, 2021. Under the terms of the agreement, the MWRA undertook to make certain modifications of the hydraulic assessment model used in the performance testing of the LTCP, as well as to develop water quality models capable of differentiating between contributions of CSO and non-CSO sources to receiving waters, principally the Charles River and Alewife Brook/Mystic River.<sup>3</sup>

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<sup>1</sup> The Discharge Report is posted on the MWRA website for public inspection.

<sup>2</sup> There were no scheduled activities during the past six-month period on the court's Schedule 7.

<sup>3</sup> As part of the Agreement, EPA and DEP, acting pursuant to 40 C.F.R. § 131.14 and 314 CMR 4.03(4), respectively, granted the MWRA's request to extend existing water quality variances affecting the Lower Charles

There are five component steps to the performance assessment that are now works in various stages of progress. They are: (1) the inspection of all existing CSO outfalls and regulators; (2) the collection of rainfall data and overflow-related data at all operative regulators and outfalls; (3) the improved calibration of the MWRA's hydraulic model (tentatively completed in November of 2019)<sup>4</sup>; (4) consideration of infrastructure improvements where the assessment shows that they may be needed; and (5) a determination of the impact of the remnant CSO discharges on water quality in the Charles River and Alewife Brook/Mystic River. The data compiled in the Discharge Report with its extensive exhibits yields some preliminary observations but few definitive conclusions. I will briefly summarize some aspects of the present data that strike me as noteworthy but will reserve any formal findings until more conclusive data are available.

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River/Charles River Basin and Alewife Brook/Upper Mystic River through 2024.

<sup>4</sup> The recalibrated model revealed some significant discrepancies between its predicted discharges and the metering results at some outfalls suggesting either errors in the calibration or metering deficiencies. For purposes of the Discharge Report, the results at ten of the forty-six surveyed outfalls were rejected as potentially low-confidence outliers. The investigations at these ten sites will be a subject of a supplemental filing with the court that the MWRA intends to submit within the next two months.

An initial matter of concern is the higher than expected volume of CSO activity observed at sixteen of the thirty-six outfalls for which Typical Year model results have been accepted.<sup>5</sup> It is possible that the higher activity level is attributable to a greater than normal rate of rainfall in 2018. The data collected for the first half of 2019 (62 storms with a total rainfall volume of 22.5 inches) indicate a pace more consistent with the Typical Year model (93 storms with a rain volume of 46.8 inches). It is also possible that the 2018 figures are not atypical but a portent of long-term climate change,<sup>6</sup> or that some data are more flawed than currently believed.<sup>7</sup> Finally, the increased activity may be attributable to site-specific weaknesses or failures. Investigations have been undertaken at each of these sites by the MWRA with the view of validating the metering results, identifying possible causes of increased CSO activity, and exploring site-specific improvements.<sup>8</sup>

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<sup>5</sup> The supplemental filing will also report more fully on the investigations of these sixteen outfalls.

<sup>6</sup> Although the number of storms in the first half of 2019 exceeded the norm by some 50 percent, as the Discharge Report observes, the great majority were small-volume storms, which is atypical.

<sup>7</sup> Some of the data generated by the metering program is described in the Discharge Report as “inconsistent,” although the more recent data appears to be free of the questionable overflow elevations and unreasonable metering results that had been noted in prior reports.

<sup>8</sup> The summary of investigative activity to the date of the Discharge Report (October 31, 2019), suggests that physical improvements may need

A second matter of importance is the refinements being made by the MWRA to the hydraulic model, which is “the primary tool” used in the performance evaluation. Given the (accurately described) “dynamic” nature of the MWRA’s system, the calibration of the model is, as it was anticipated to be, an ongoing process. Also of interest is the preliminary assessment of CSO performance measured against the LTCP levels of control based on the accepted data gathered between April 15, 2018, and June 30, 2019. On the positive side of the ledger, all 27 outfalls scheduled for elimination in the LTCP have been successfully closed together with an additional six in Boston, Cambridge, and Chelsea, and two along the South Boston beachfront that were scheduled in the LTCP to be eliminated up to a 25-year storm. The remaining five outfalls along North Dorchester Bay that were to be eliminated up to the 25-year storm have been effectively neutralized by the

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to be made to the two CSO controls serving Alewife Brook (SOM001A and CAM401A), the two Mystic/Chelsea Confluence controls (CHE004 and CHE008), and the Somerville Marginal Facility Upper Mystic River control (MWR201). This latter site is the subject of a joint effort between the MWRA and the City of Cambridge (approved by the MWRA Board of Directors) to initiate a trial partial sewer separation project in the Cambridgeport neighborhood to relieve pressure on the Cottage Farm facility. In many of the remaining cases, the preliminary investigations suggest that the increased CSO levels may be attributable to potential hydraulic restrictions or maintenance problems. Repairs are already underway on one Fort Point Channel outfall (BOS070).

completion of the South Boston CSO Storage Tunnel.<sup>9</sup> Work on developing receiving water quality models for the Lower Charles River/Charles Basin and the Upper Mystic/Alewife Brook regions, a requirement of the CSO variances that were discussed at the July 19, 2019 court hearing, is still in its formative stages.<sup>10</sup>

To conclude on a reassuringly positive note, the MWRA reports that despite the hiccups in the data gathered since April of 2018, “the recent Typical Year model run validates the accomplishments of the Authority and its member communities in their CSO investments over the past 30 years. The Typical Year results show that region-wide CSO discharge volume has been reduced for 3.3 billion gallons a year in the late 1980’s to approximately 400 million gallons today, an 86% reduction.” This latter 86% figure is the indelible hallmark of one of the most successful environmental remediation

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<sup>9</sup> According to the Discharge Report, no CSO has been discharged to the South Boston beaches from the outfalls since the Tunnel went into operation in 2011. The MWRA has been forced to close the stormwater gates to the Tunnel permitting stormwater discharge to the beaches on only three occasions during the same period, most notably during Hurricane Irene in 2011.

<sup>10</sup> A principal purpose of the models is to assess whether the remaining CSO load, as opposed to other pollutants (principally stormwater), creates an obstacle to the attainment of the bacterial water quality standards mandated by the Clean Water Act.

projects undertaken in modern times and may well improve further as lessons are learned from the performance assessment now underway.

**ORDER**

Consistent with the court's revised Scheduling Order, the MWRA will submit Compliance Report No. 247 on or before June 19, 2020. The court will also welcome the filing of the supplemental report being prepared by the MWRA based on the data gathered since June 30, 2019. The court will reserve substantive comments until a more definitive performance assessment is possible.

**SO ORDERED.**

**/s/ Richard G. Stearns**  
**UNITED STATES DISTRICT JUDGE**